

Sustainability, Innovation, and Competitiveness in Tourist Destinations

Sam Cole, 2016, Revision of a presentation at the International Executive Forum on Leading Sustainable Tourism in Latin America and the Caribbean, Aruba 2014

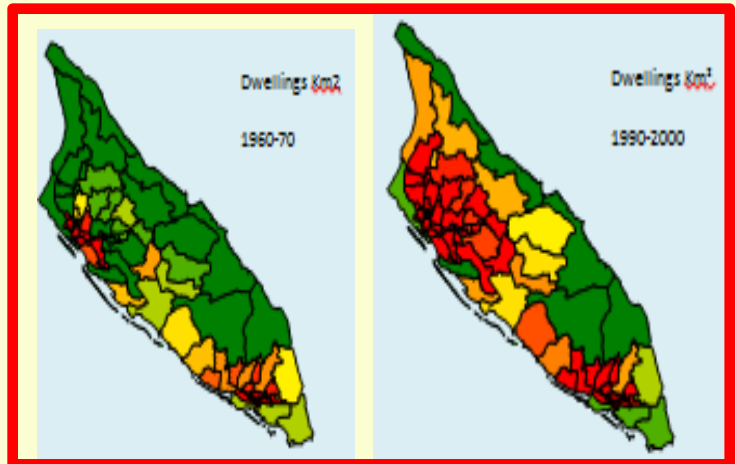
Hjalager (2012) has argued the need to understand better the “aggregate’ innovativeness” of tourist destinations and its implications for their “cumulative growth”. Moreover, as Nedergaard (2013) complains, “markets (have) become ever more chaotic through the processes of globalization, technological evolution, increased competition, and rapidly changing consumer needs and wants.” Understanding collective impacts of individual initiatives that confront local and global changes is especially necessary for small island destinations with fragile economies and ecologies.

- In this milieu, the challenge for “innovation policy” at the destination-level is to sustain Global Competitiveness, by guiding and coordinating efforts to address the complex challenges of Positioning, Congestion, and Volatility.
- I begin with a brief outline of past target setting plans for tourism in Aruba.
- My presentation uses a “carrying capacity” model of a small tourism cluster in a highly competitive global economy with growth paths ranging from disruptive fluctuations to evolutionary sustainability.
- Based on data for 1987-1996) for destinations across the Caribbean, the model suggests that the net effect of local innovation approximately offsets the global competitive pressures.
- To illustrate the interaction between these forces and tourism management and policy, the estimated model is used to track the growth trajectory of Aruba tourism arrivals from 1953.
- The presentation includes illustrations of related studies with college enrollments, big data, tourism clusters, airport access, space tourism, culture regions, ecological accounting, and other islands, each of which offers insights into the challenges facing tourism destinations.

Branding Aruba and a Return to Heritage



In addition to the Caribbean-wide attributes of Sun, Sand, and Sea, Aruba has the legitimate and enviable brand “One Happy Island”. With the demise of the oil refinery tourism has maintained and driven the Island’s economy. Following recurrent concerns about over-development, the National Tourism Council (set up in 2001) posed the overarching question of “how far and how fast” tourism should expand. The “Framework for Sustainable Tourism in Aruba”



proposed restrictions on large hotel expansion and smaller-tourist clusters within distinctive culture regions at a pace that matches emerging needs, but below the “carrying capacity” of the Island. This would provide greater economic benefits to Arubans whilst restoring elements of the past to the future.

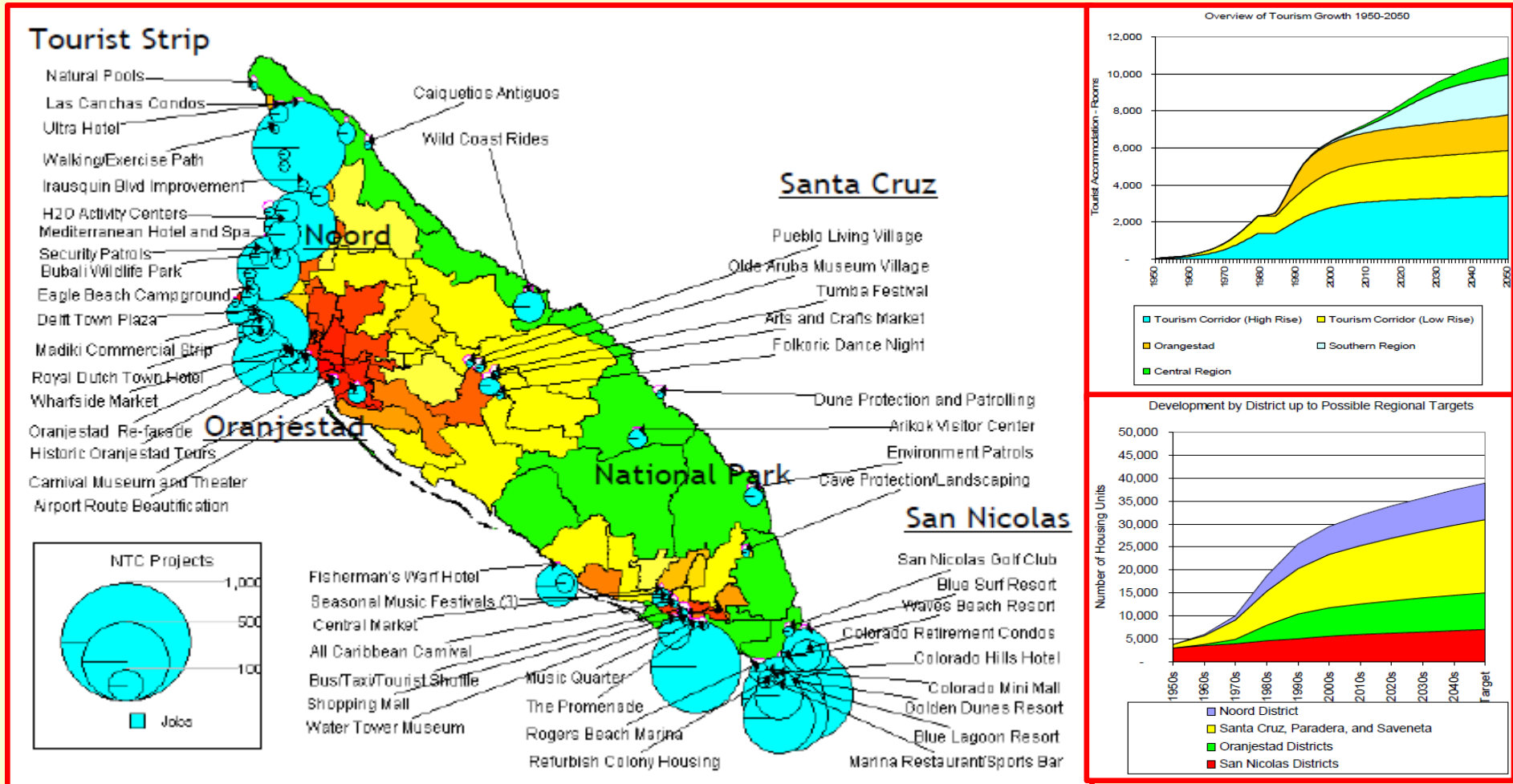
Sustainability as a Recurrent Issue

Past Plans - Timeline for Aruba Tourism Styles and Policies

STAGE/APPROACH	POLICY/EVENT	STYLE OF ACCOMODATION	OBJECTIVE/OUTCOME/SUSTAINABILITY
Late 1940s-1960 Aruba Tourism Commission	Cruise ship visitors stay- over	Small and Mid-scale Accommodation	Familiarity of former US refinery employees Identify tourism resources and style of tourism
Early 1960-1980	Initiation of Mass Tourism through Public Subsidy	Large Chain Hotel/Casinos oriented to US market	Offset Growing Layoffs from Refinery Contraction. New hotel is “Just the Beginning” (Juancho Irausquin)
1981 First Tourism Plan	Slowing Growth and Uncertain Future	Shift to Timeshare and upgrading of properties	Occupancy-driven Investment Prescription and Physical Plan for Tourism Corridor but warned that “Aruba tourism may have reached its limits”
1983 Independence Macro-Economic Plan	Adjust Pace and Style of Tourism	Add Aruban scale and diversity	Cautioned against rapid expansion given low unemployment
Mid-1980s-1992-2000 Crisis Measures UNDP, IMF, DECO,	US Recession, Refinery Shut-down, Transition to Status Aparte, out- migration.	Treble rooms. Increasingly large scale properties and “speed- up” of First Tourism Plan, Investor Guarantees.	Considerable overbuilding leading to delays, miscalculations, and incentives. Demolition of new properties and rapid immigration New Hotel Moratorium.
National Tourism Council (2003)	Public and Tourism Industry-related Concerns	Clarify existing tourism product and possible new options	NTC and Annual Conferences -Bridge Public, Private, and Political Divides, Sustainability
Sustainability Framework (2004-5)	Match to Aruba income, fiscal, demographic cycles	Improve existing style and successively add new culture regions and scales.	Smoother expansion paced to Aruba needs and carrying capacity. Anticipate “surprises”. Education and Quality Improvement
National Integrated Strategic Plan (2009)	Globalized Competition and Culture	Healthy balance of visitor and population needs.	Harmonious, dynamic and sustainable national culture
Winning the Future (2012)	Increasing demand, tight labor market, long lifespans,	Refocusing on Tourism Strip and City Clusters	2011 marks” limits to tourism as an engine of growth.” Tourism as “Catalyst for Happiness”.

A Framework for Sustainable Tourism in Aruba (2004)

“How Far and How Fast?”



Expand tourist accommodation by at most 100-150 rooms annually in a succession of “culture region” clusters matching anticipated resident Aruban labor force growth and visitor income growth and building on local talents and opportunities. If this approach was adopted, other issues of sustainability could be better addressed.

Culture Regions Positioning Products and People

Culture Area Concept

- With globalization (increasing exchange of goods, people, and ideas trade, migration, ideas), cultures have become diffused and less tightly territorialized spatially
- So, it becomes harder to identify distinct cultures, and less easy to project distinctive or authentic heritage.
- One goal of the framework was to make the traditional culture of the native-Arubans more explicit.
- This made the identification of Aruban material culture, traditions, other symbols of identity, and history a priority.
- The Aruba Framework sought to identify and reinforce selected aspects of a culture within a designated area as to identify a potential theme for particular locations and hence bundles and clusters of tourism products (accommodation, activities, events, and so on).

In other words, build tourism around people.

Santa Cruz- The Heartland of Aruba

In view of its Indian-associated history, and the continuing traditional character of the Santa Cruz community, it would be more than appropriate to promote this area as the folkloric, most native, heart of Aruba. Even today, the festivals of dera gai and dande, are celebrated here with a particular respect for their traditional forms.

San Nicolas- The Sunrise Side/Music City

The town of San Nicolas is located at the southern end of the Island (the Sunrise Side), and has the majority of the English-speaking Afro-Aruban population residing there. The strategy was to locate culture traits originating from the wider circum-Caribbean region that had been imported into San Nicolas through immigration.

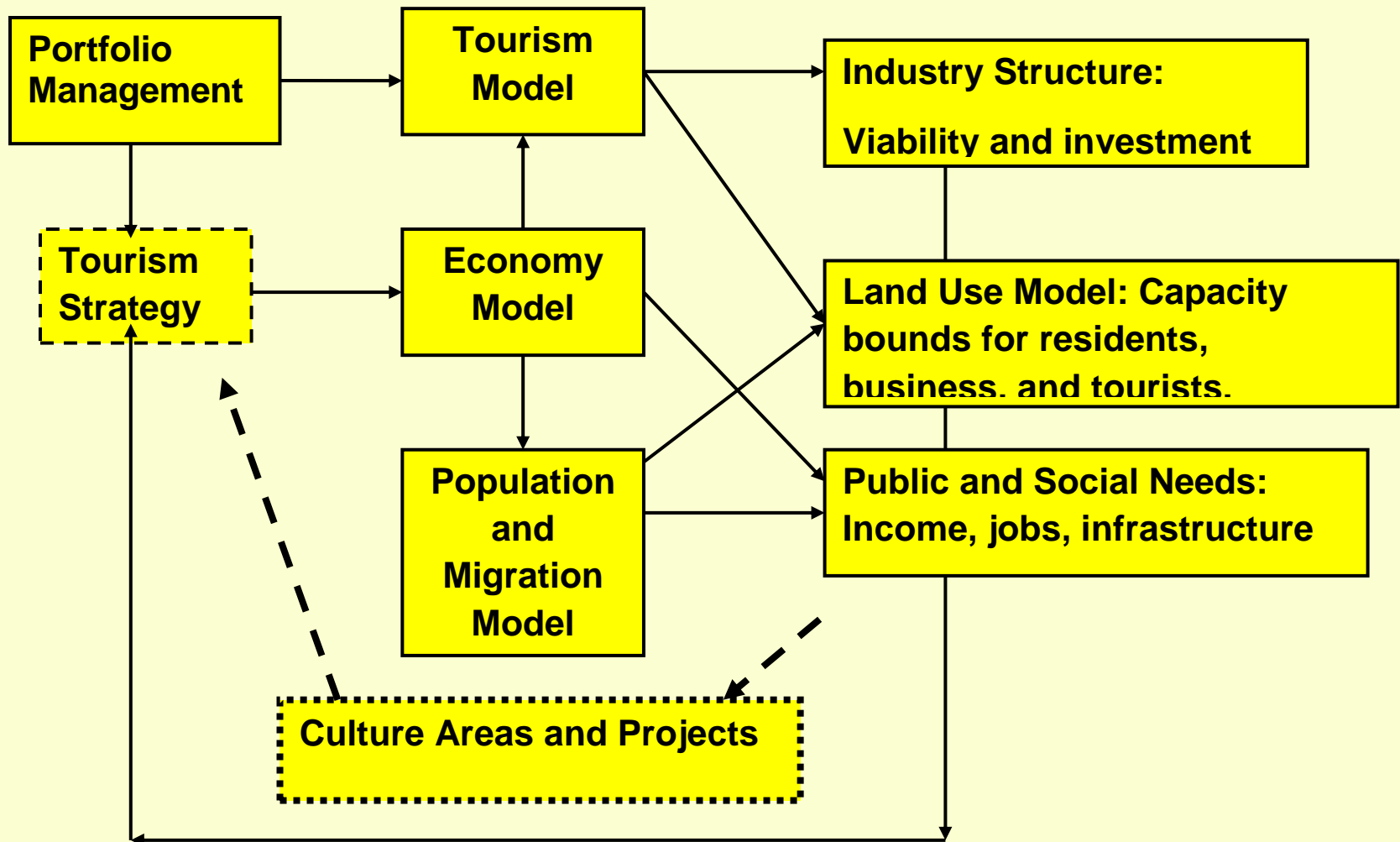
Palm Beach and Oranjestad- The Tourist Strip and Heritage Town

The main goal for the main tourist areas which are quite cosmopolitan was to upgrade and improve amenities for both tourists and local residents.



Evaluating a Strategy:

Tourism-Economy-Demographic Model of Sustainable Development in Aruba



Adding it all up: Cultural-Ecological Accounting

An accounting framework allows the “total” (direct and indirect) economic and physical impacts of individual and clustered projects and strategies to be assessed.

Aruba and Globalization – Layering of Populations and Cultural Structures

HISTORICAL EPOCH	POPULATION	ECONOMY	ENVIRONMENT
PRE-COLUMBIAN (~1400BC) (intermittent settlement)	Arawak - Caiquetia	Fishing Manioc Hunting	Small Settlements Cave Dwelling
COLONIAL ERA (~ 1500 on) Spanish (1500-1634) Dutch (1634 on)	Spanish Dutch Sephards African Red Indians South American	Subsistence Farming Goat Herding Fishing Seafaring Ranching Gold and Phosphates Aloe Plantations Laundry and Hat Weaving	Smallholdings Barrio Settlements Small Townships De-vegetation Land Clearance Land Enclosure Tree-Felling and Soil Erosion
AMERICAN ERA (~1930 on) Dutch Colony	North Americans Surinamense Other Dutch Colonies Dutch English Caribbean	Transshipment Oil Refining Commerce Construction	Land Abandonment Urbanization Squatter Settlement Road Building
NATIONAL ERA (~1975 on) Status Aparte (1986)	48 Nationalities More Americans Haitians Dominicans Hong Kong Philippines	Service Off-Shore Finance Construction Transient Tourism Cruise Tourism Container Harbor Reopen Refinery	Salination Oil Seepage Tar Dumping
GLOBALIZATION ERA (~1990 on) Separation	More Dutch Colombians Venezuela Other South America Indian 124 Nationalities	Global Hotel Chains Time Share	Rural Encroachment Natural Park and Reefs Golf Course Jeep Tours

Characteristics of cultural, economic, and social divisions in Aruba.

	EXPATRIATE	METROPOLITAN ARUBAN	RURAL ARUBAN	MIGRANT ARUBAN
POLITICAL STRUCTURE				
STATUS	Transient	Outsiders: Settled	Insiders: Settled	Outsiders: Settled
ORIGIN	Dutch American	Europe Mid-East	Dutch European	Iberian Indian Caribbean Basin
ARRIVAL	European 1915-on 1930-on	Asian 1700-1900	Venezuelan ~1400-1850	African ~1400-1850
AFFILIATION	None	AVP	AVP	MEP (PPA)
ECONOMIC STRUCTURE				
OCCUPATION	Professional Management	Management Administration Education	Entrepreneur Commerce	Clerical Laboring
ACTIVITY	Tourism	Commerce	Commerce	Informal Small Business
LIFESTYLE	Middle to Upper Income Luxury Homes Apartments Beach Homes	Wealthy Luxury Homes Villas	Middle Income Suburban Ranchos	Lower Middle Dense Village Barrios Public Housing
SOCIAL STRUCTURE				
RELIGION	Mixed	Protestant (various)	Catholic	Protestant (various)
LANGUAGE	English Dutch	Dutch English	Papiamentu Dutch	English French Spanish Chinese
SETTLEMENT	Orañjestad Malbak Euclaves	Orañjestad Suburbs Sarameta	Orañjestad Santa Cruz Noord Curaçao	San Nicolas Dakota Orañjestad

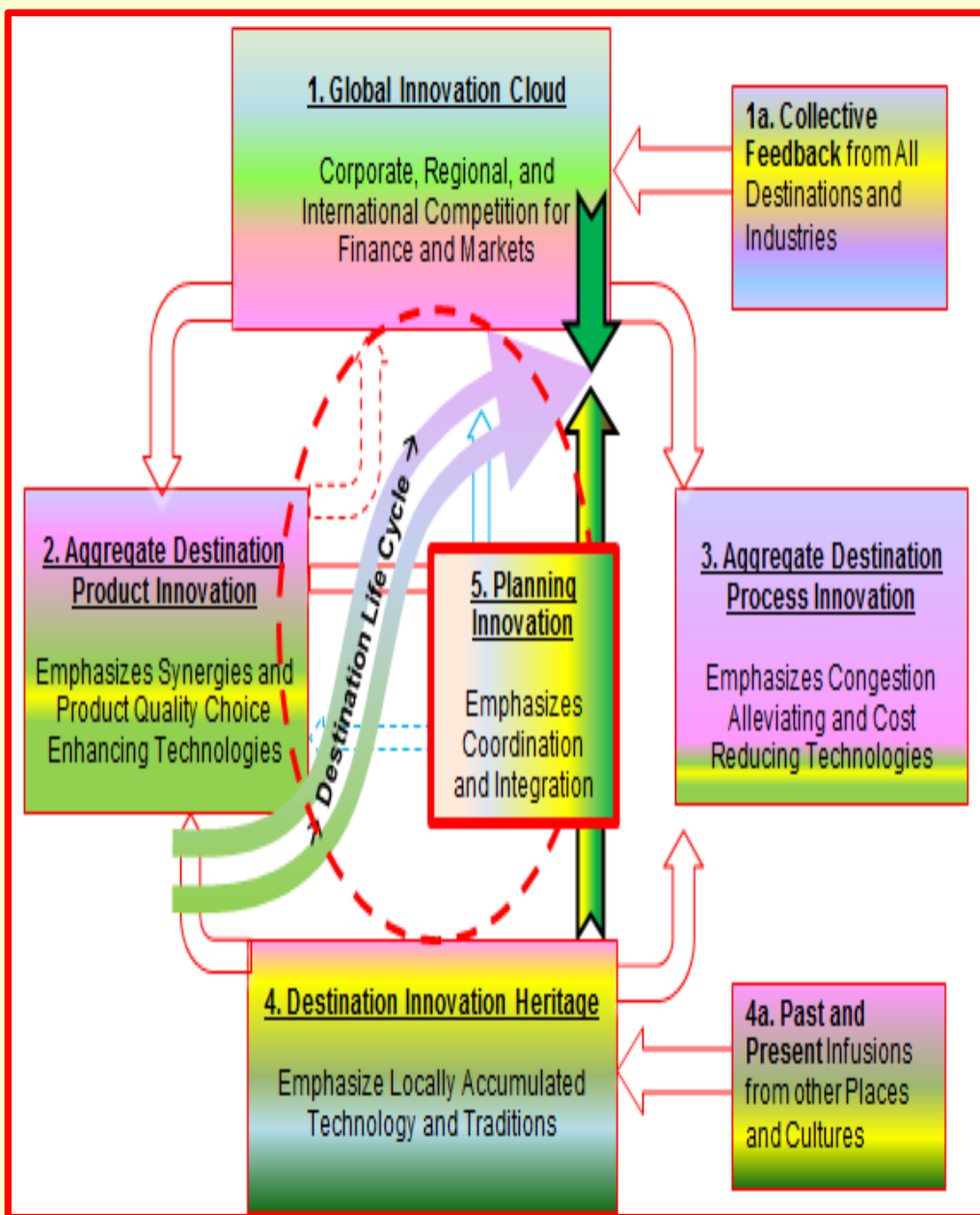
Note: Table is indicative only based on Census data (1991, 1991, 2000) and the author's impressions. There is considerable overlap across categories.

SECTOR or ACTIVITY	LIFELINES					TOURIST ACTIVITIES					OTHER PRODUCTION				FACTORS				HOUSEHOLDS				INSTITUTIONS				CAPITAL				TOURISTS & OVERSEAS				
	W	C	W	W	E	T	H	L	T	B	C	T	I	C	O	O	L	L	L	L	D	L	L	H	M	E	F	G	H	F	G	S	C	I	O
All/million 1990	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
Wokland Terminal (Oil)	1																														2019				
Coastal Refinery (Oil)	2			67																											1994				
WEB-Electric	3	2	3		41	52					0.1				3																				
WEB-Water	4	2							5	2	1		1		1								6	25			1								
ELMAR	5	2							7	5	2	0.1			10	6							8	27			2				4				
Transport-Telecom	6																																		
HighRise Hotels	7	1		0.4									0.1	1		28							0.4	1					14		155				
LowRise Hotels	8																						0.4	1							126				
Tourist Shops	9																						25	45							36	7			
Bars/Cafes	10																						2	4							23	1			
Casino	11																						1	1							74				
Taxi/Tours	12																														20	2			
Industry/Agriculture	13	2		4	1		0.2	1	1	0.1	0.1		18	30	1	25							75	171		7	57	19	7	26					
Construction	14	4	10	2	1		0.2		0.1				7	0.1	0.2	17							1	9		2	48	213	9						
Other Commerce	15	2	2	3	1		1	1		0.1	0.1	5	20	10		14							129	305		3	5	2			212				
Other Services	16	1	3	2	1		14	13	3	2	4		26	23	21	59							59	179		81	4	86	176						
Labor (low education)	17	1	2	1	1	1	13	9	3	1	5	1	5	39	24	25							13			11					11				
Labor (middle education)	18	2	4	2	1	1	14	9	5	1	5	1	4	40	33	44										46					4				
Labor (high education)	19	3	7	4	2	3	7	4	3	1	2	1	3	28	18	87										98									
Depreciation	20	5	13	4	7						1	31	1	14	9	6	63														1				
Local Surplus	21			9	12		22	11	19	7	5		62	10	130	332																			
Low Income Households	22																105	59	12	99											16				
High Income Households	23																45	136	230	450											38				
Migrant Households	24																																		
Expatriate Households	25																																		
Firms	26																						157	77											
Government	27											7	40	5	20		20	30	40	6		1	31		67										
Household Capital	28																																		
Firms Capital	29																																		
Government Capital	30																																	262	
Stayover Tourists	31																																	59	
Cruise Ships	32																																	713	
Imports	33	2000	2021				61	46	68	13	20		230	95	465	59																		11	
Overseas Finance	34						36	5																							85	689			
EXPENDITURES A/m 1990	2022	2070	98.4	45	80		193.6	120.1	111.6	25.5	11.3	21	44.2	230	131	761	170	225	382	163	226	316	974	0	240	302	96	398	34	631	10	16	1045		
PHYSICAL INPUTS																																			
Work (year/A/m)	0.099	1.45	2.24	2.58	1.46		11.9	12					10.5	14.2	27	10														22.2					
Waste (lb/A/m)	3.7	18.6	23	4.6	2.3		1.1	1.0	0.7	0.7	0.9	1.0	1.8	5.0	5.0															10.0	5.0	# 5.0	5.0		
Land (km2/A/m)	0.00	0.00	0.03	0.03	0.05		0.05	0.04	0.09	0.14	0.01	0.05	0	0.02	0.01															0.14	0.03	0.039	0.02		
Water (m3/A/m)	0.00	0.00	0.00	0.00	0.01		0.03	0.02	0.00	0.04	0.01	0.00	0	0	0.01															0.02	0.02	0	0.02		
Energy (Btu/A/m)	0.00	0.00	0.67	0.87	0.65		0.05	0.04	0.32	0.05	0.04	0.00	0	0	0.02	0.01														0.07	0.03	0	0.02		

Tourism Cluster Data Black Hole

Emissions and Environmental Inputs Data Grey Hole

A Global Innovation Cloud and/versus Local Innovation Heritage

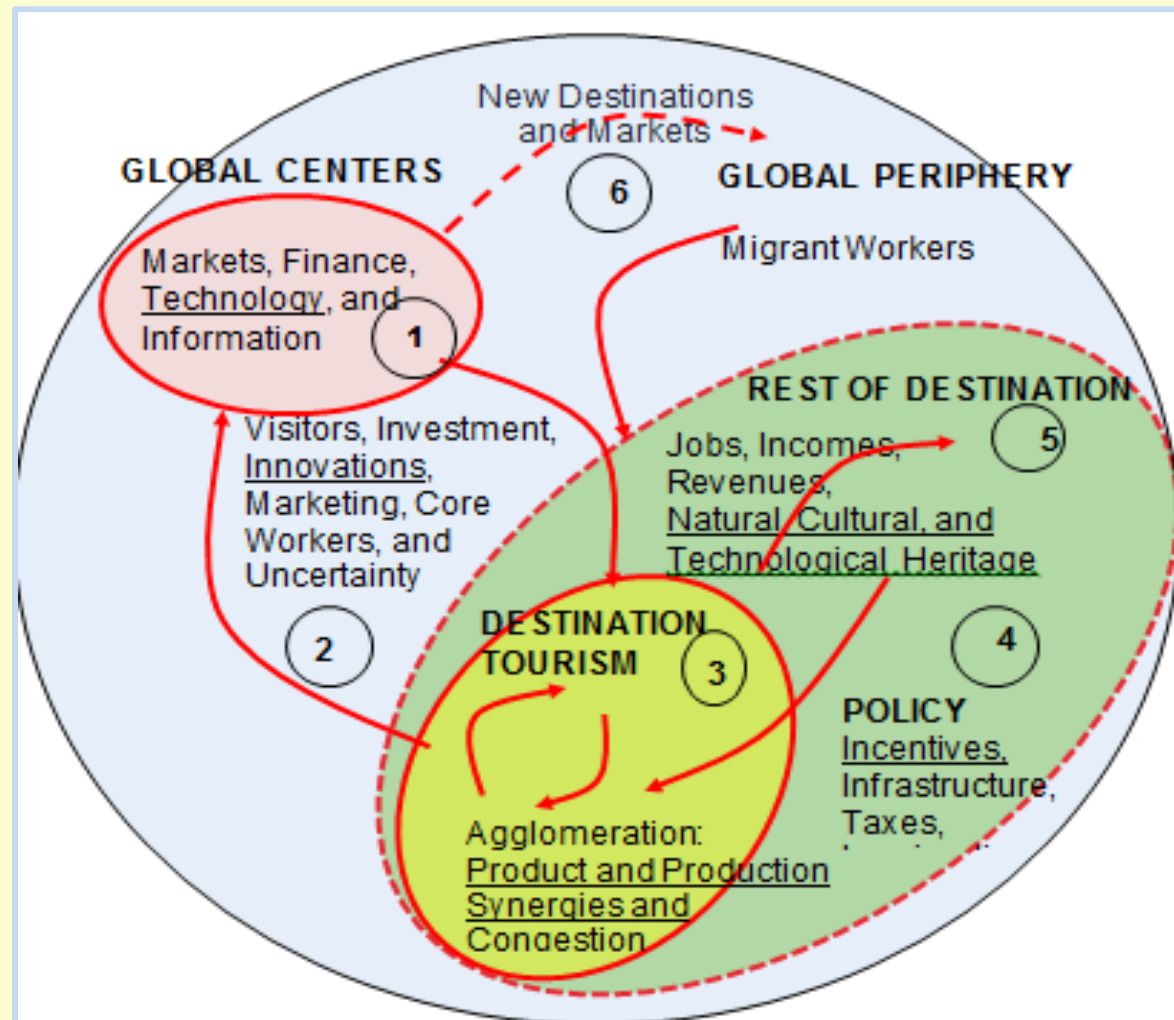


Destination “innovation” includes the transfer and adapting of technologies to local conditions, as well as local products adapted to visitor markets.

Abundant global demand and investment are complemented by a “global innovation cloud.” A destination’s ability to absorb and translate this global know-how depends on skills, experience, and organization.

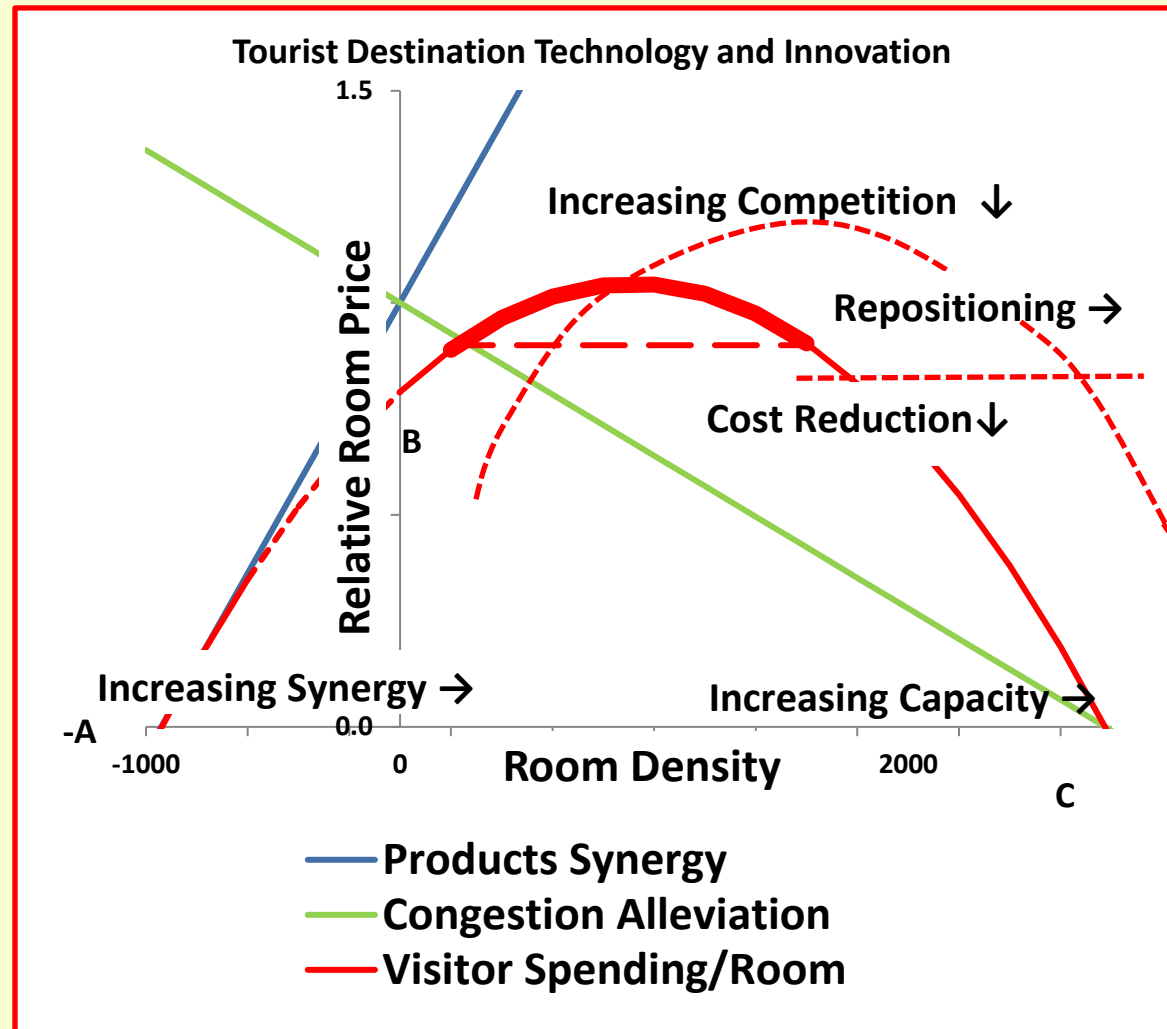
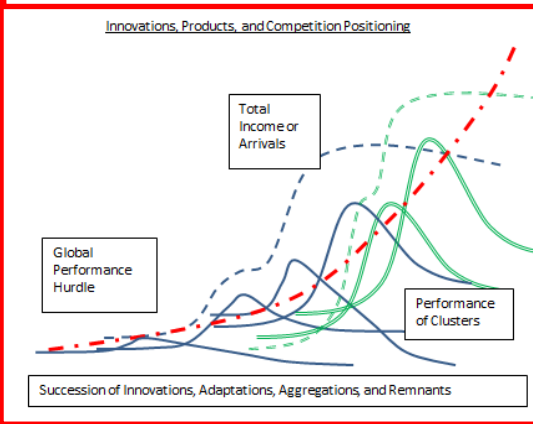
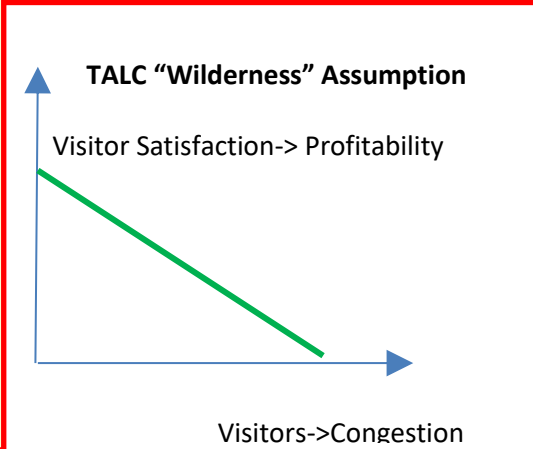
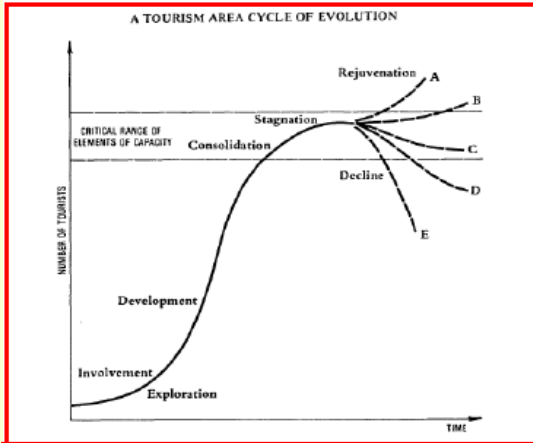
Local “unique” cultures comprise a layered innovation heritage from centuries of migration and adaptation to local resources. Exploiting this depends on an understanding of visitor markets and residents’ aspirations, and concerns.

The “Globalized” Tourist Destination



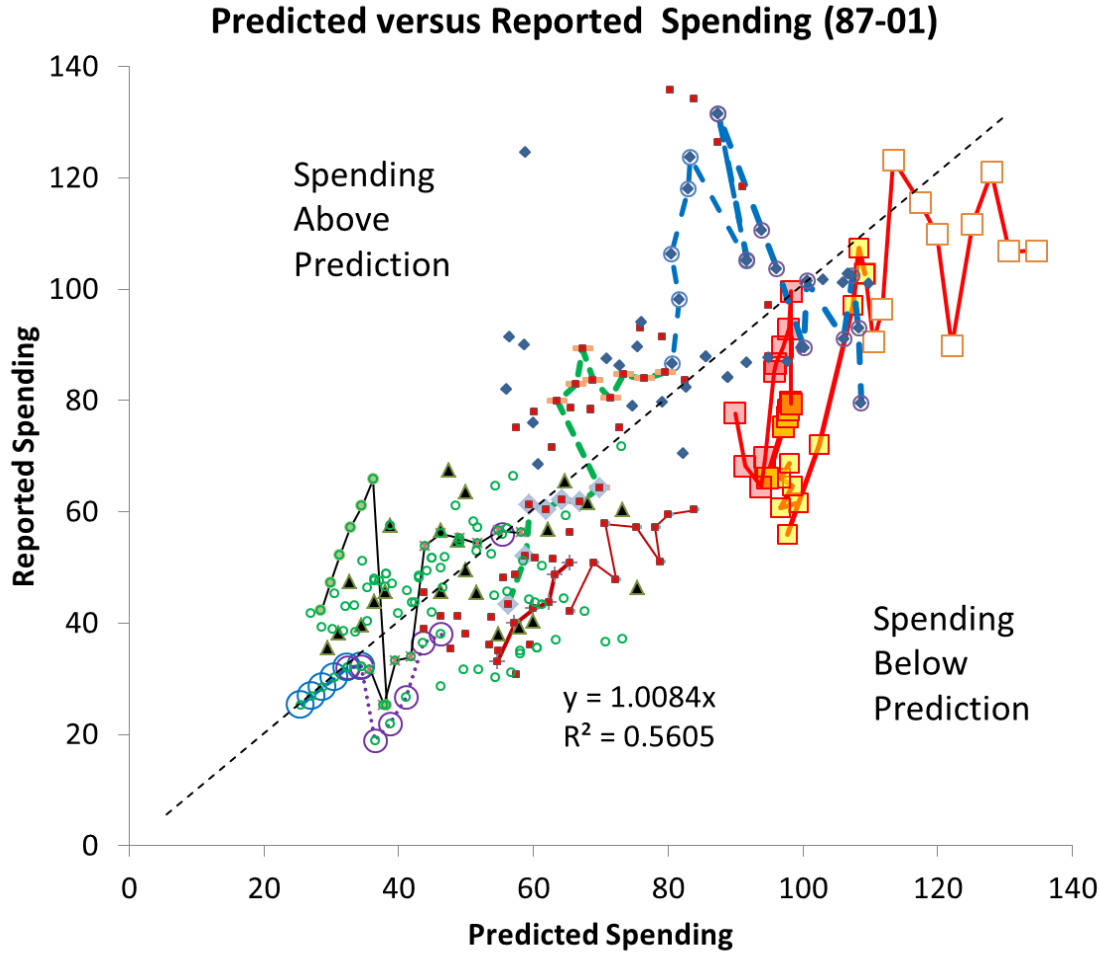
Markets are global: given a sufficiently attractive product, demand is abundant and also investors, when profitability is above the global hurdle. Note that similar “limits” arguments and counter-arguments, as for tourism, are invoked across most national and global entities.

Classic and Modified TALC (tourism Area Life cycle)



Destination attractiveness = intrinsic attraction which is increased by synergies and decreased by congestion = $B(1+N/A)(1-N/C)$, where N is visitors, rooms, or room density. The additional term promotes rapid change and volatility.

Estimating Caribbean Synergies, Congestion, Technical Change with Competition



- ▲ Emerging
- Other (Recent)
- Aruba 87-96
- Barbados 95-01
- Haiti 87-96
- St. Lucia 87-95
- Trinidad 95-01
- Intermediate
OAS & CTO 87-95-01
- Aruba 95-01
- Barbados 97-96
- St. Kitts 87-96
- St Lucia 95-01
- ◆ Mature
- Aruba 77-86
- Aruba 01-09
- Haiti 95-01
- St. Kitts 95-01
- Trinidad 87-96

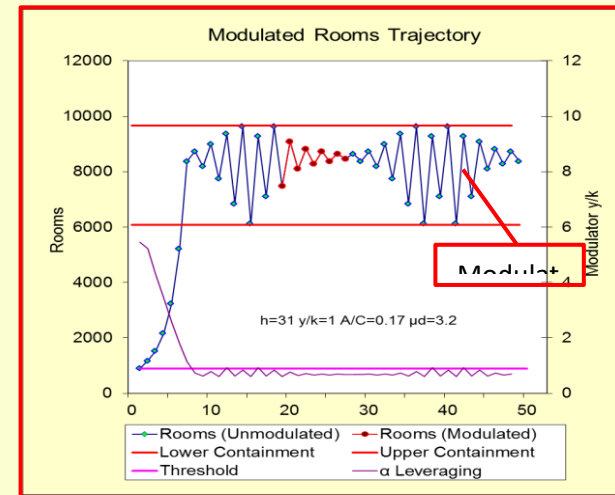
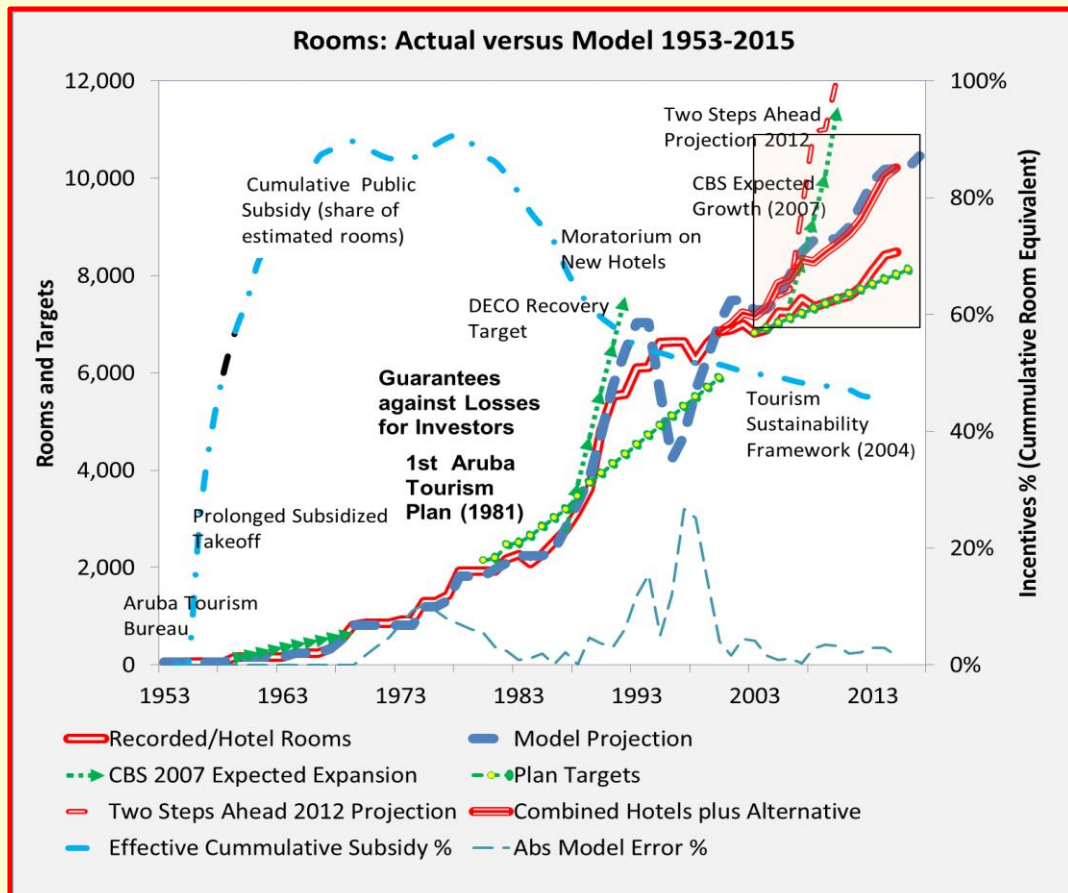
Estimation of the annual rates of change of B(t), A(t), and C(t) for 20 destinations in the Caribbean using ECLAC/CTO data between 1987 and 2001. This suggests that on average Value Competition nearly negates Positioning and

Parameter	A	B	C
Base 1990	5.5	55	32
Annual Rate	-1.3%	-6.0%	5.2%

Congestion innovation.

Deviations from average performance depend on other variables such as Access, Safety, Service, Products, Inputs, Policy, and Capacity for Innovation and Organization.

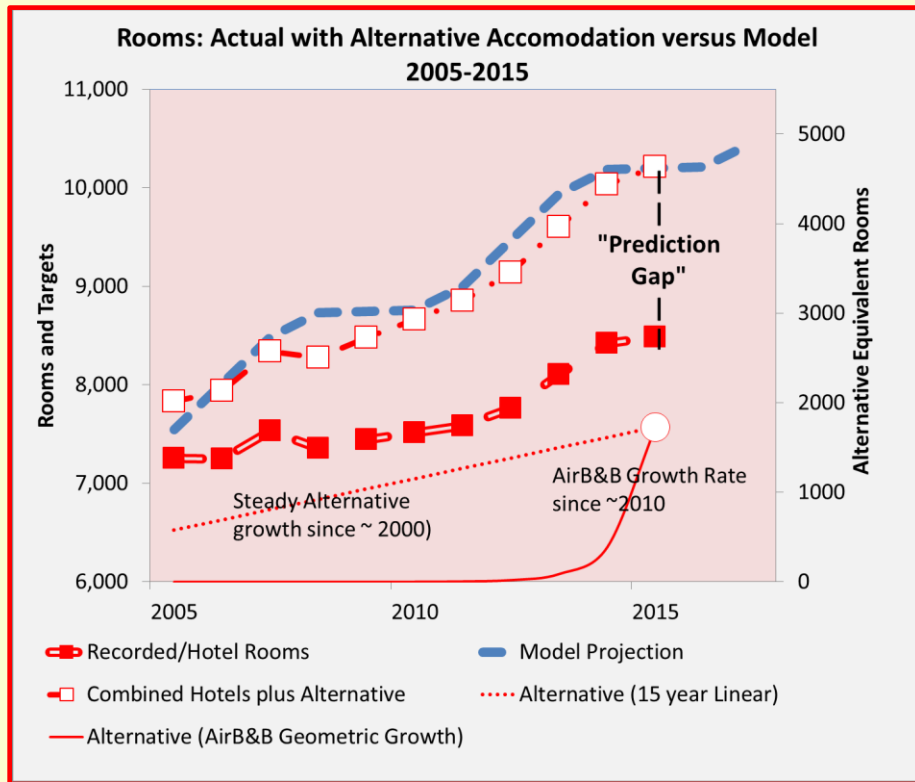
Assessing Policies for Growth and “Chaos” Stabilization



$$N_{t+1} = N_t + N_t \alpha_t y / k [B(t) \{1 + N_t / A(t)\} \{1 - N_t / C(t)\} - e]_h$$

The Caribbean-wide estimation and past policy goals and incentives and restraints are used to match trends in Aruba, backwards to 1950 and forwards to 2012. This shows the role of incentives for initial growth and overshoot and of restraints in modulating the potential volatility of tourism developments, and also the interaction between competing destinations.

Closing the Gap – The Impact of the Web and AirB&B



It is apparent (from the previous slide) that the post-2004 projections based hotel and timeshare room statistics under-estimate the growth of accommodation in Aruba by about 1,700 rooms. The explanation appears to be that, even though the Government has imposed a near-moratorium on major hotel expansions, the increasing demand was taken up by new “alternative accommodation” (private homes, apartments, villas, condominiums. According to the ATA, the number of visitors using “non-traditional” accommodations increased by 33% in 2015), comparable to growth in destinations in the US, EU, and elsewhere. Although the “rooms” are mainly in

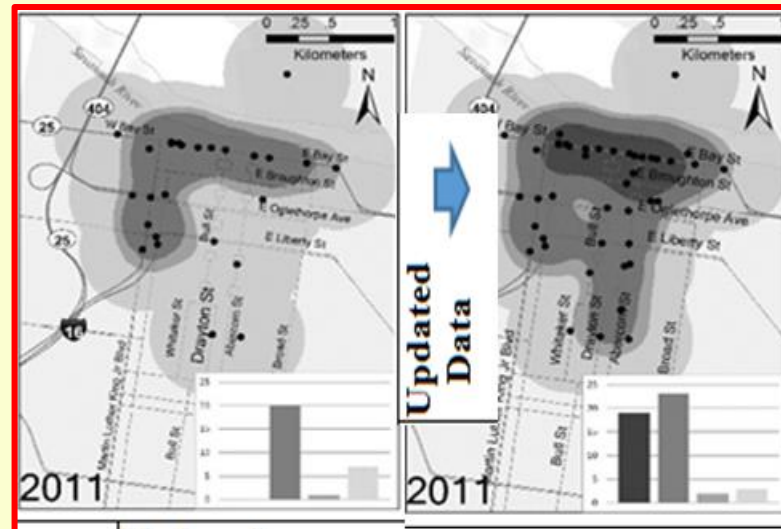
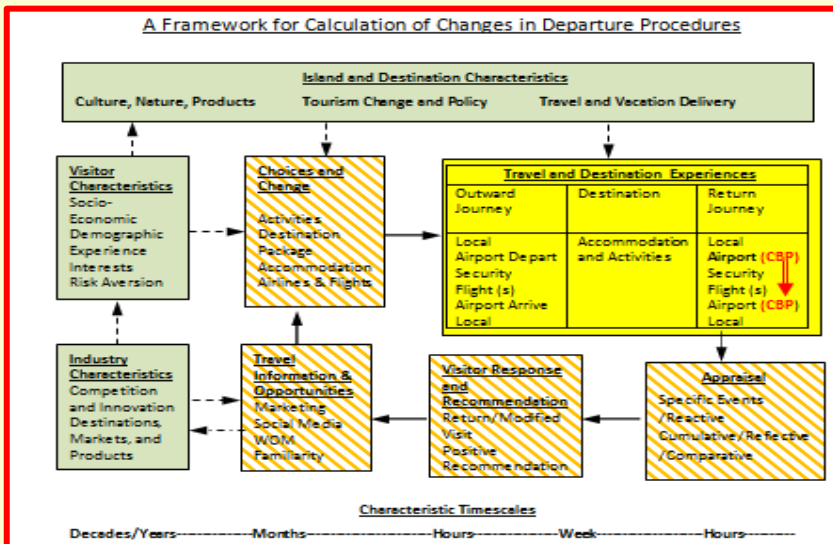
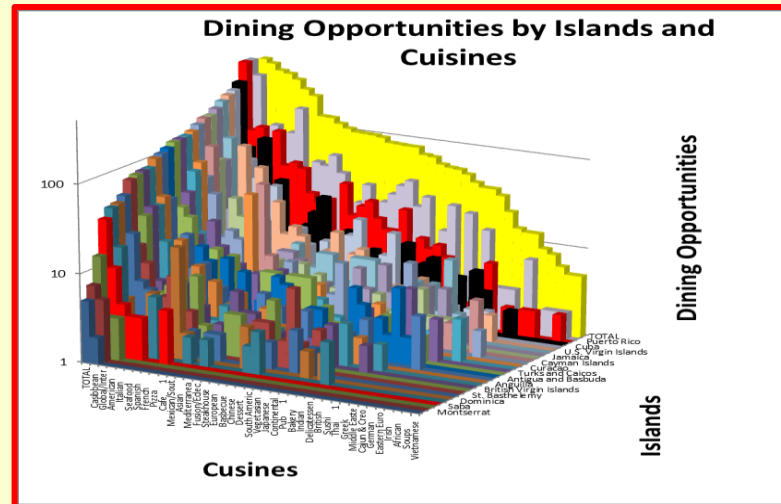
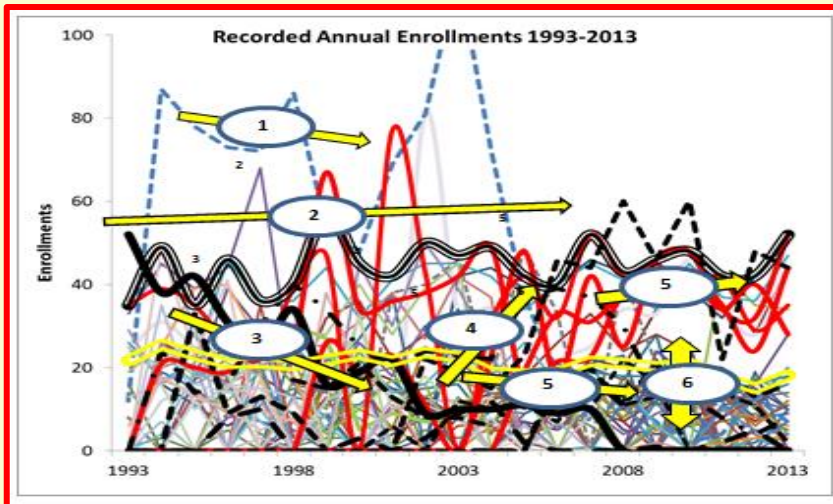
	Nov 2015	Nov 2016	Change %
Hotels (37)	38	37	-3%
B&B and Inns (30)	27	30	11%
Specialty Lodging (83)	70	83	19%
Vacation Rentals (709)	651	709	9%

Source: TripAdvisor

existing properties, new on-line marketing via AirB&B, TripAdvisor, etc. has propelled expansion of this alternative (but actually quite traditional) sector. There is no official estimate for Aruba but a web search (adjusting for size, bookings, timeshare rental, internet growth rate, etc.) suggests that this is equivalent to about 1,500 rooms, which

closes the “prediction gap”. In effect, new technology and the market may have (yet again) circumvented official policy and tourism management.

Work in Progress: Enrollments, Cuisines, Travel Security, Tourism Clusters with "Bigger Data"



Extrapolating to Galapagos – A World Heritage Destination

While one should be cautious in extrapolating theories, findings, and data between destinations it is notable that the visitor trends in other islands are similar to those for Aruba. This applies even to an archipelago such as Galapagos - albeit with different visitor volume and composition, geography, branding, and political and management.

Presently, there are some 200,000 annual visitors - a tenfold increase over 30 years, with cruise ships increasing in both numbers and capacity. Tourism is concentrated in three islands (Isabela, Santa Cruz and San Cristobal). With rising congestion, tourist satisfaction with “wildlife and beauty” and “crowding” have steadily decreased. Induced by tourism, the resident population has risen at a comparable rate. Attempts to set “guidelines” - 12,000 visitors annually in 1968 rising to 25,000 in 2015 - appear to have failed.

Current tourism plans in Galapagos are similar to those in the Aruba Framework – new accommodations are restricted to 35 rooms and with visitor redistribution achieved by opening up other islands. However, this does not appear to include time phasing and synergistic sizing of tourist clusters. Based on the experience of Aruba with the several post-Framework challenge of enforcing moratoria and other restrictions, the same potential for incremental creep across the Galapagos Islands is apparent.

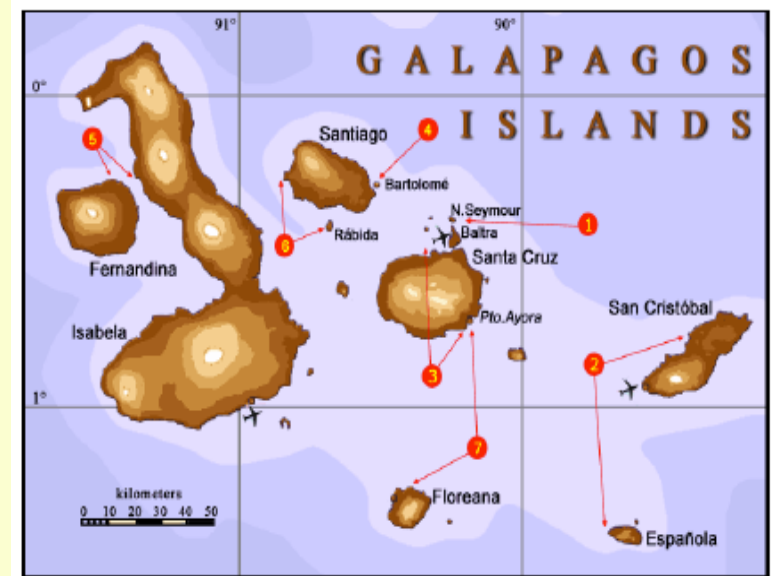
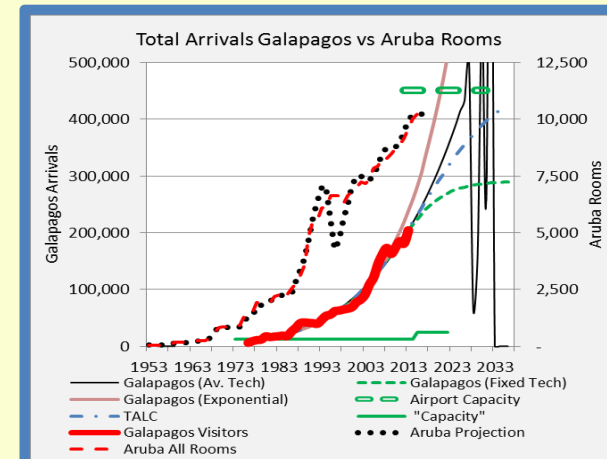


Figure 1 The Galapagos Islands (Source: <http://www.quido.cz>)

Alternative Projections for Galapagos

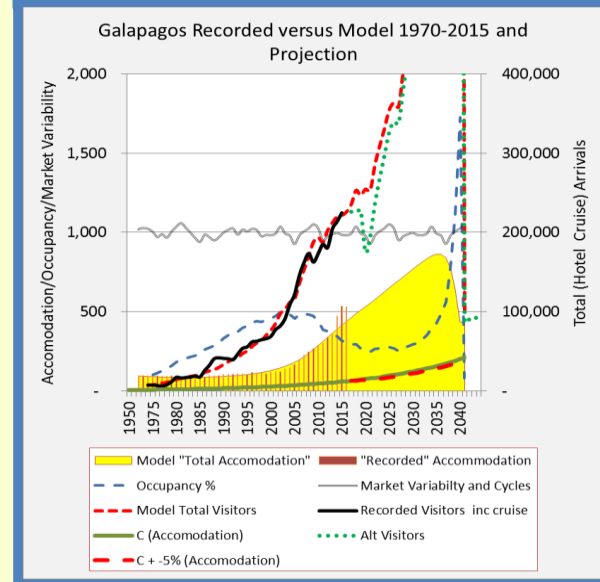
The data required to estimate a version of a policy model (as for Aruba), are not available for Galapagos. In any case, the balance of on-shore accommodation and offshore floating hotels, territorial politics and demography, ecological distinctions, and so on, signals a more market-segmented, inter-island analysis.

As an illustration, using available total Galapagos arrivals data from 1977-2013, four trend models (exponential growth, TALC, Modified TALC, and Modified TALC with Industry-wide change) are estimated. The last uses cross-Caribbean rates for in clustering synergies and congestion with other market and productivity shifts captured via the growth parameter. While there is little difference in the models "fit", the projections to beyond 2020 differ dramatically. The volatility matches the "overshoot" projections for Aruba (without mitigating policy) and arises from similar globalizing processes. An exploratory multi-island model replicates the pattern. Whether or not the proposed measures in Galapagos avoid overshoot and extreme volatility, the rising growth propensity and local versus national versus international institutional context tourism is on track to propel arrivals beyond possibilities for protection of the Islands' unique heritage.



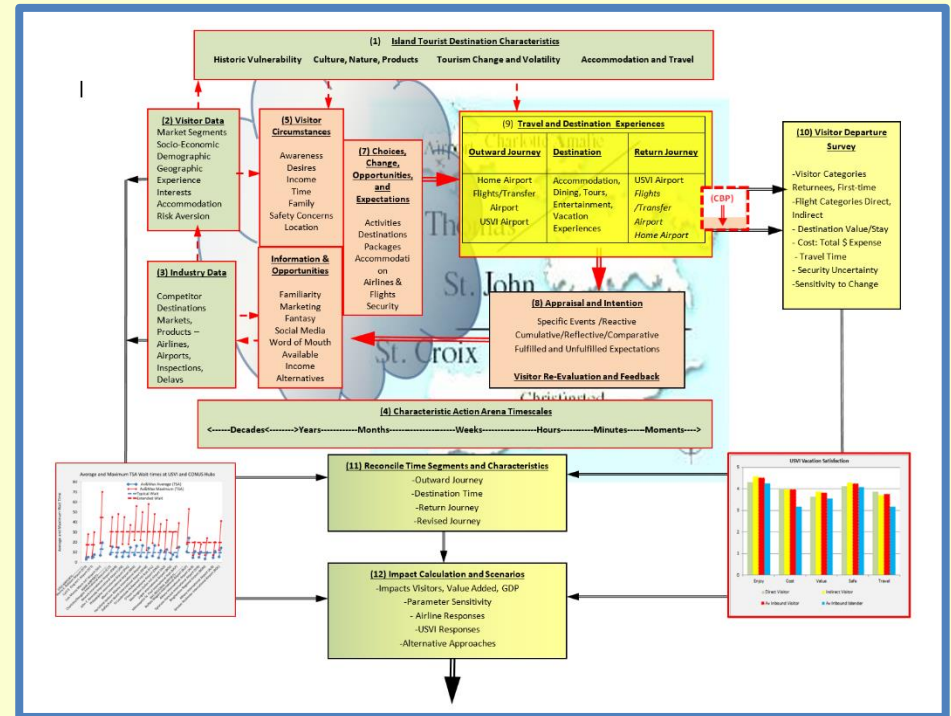
Fit to Galapagos Visitor Trends 1977-2013

Model	Fit (Av Abs)	Parameters
Growth	12%	2
+ Congestion (TALC)	10%	2+1
+ Synergy	10%	3+1
+Technology	9%	4+1+(2)

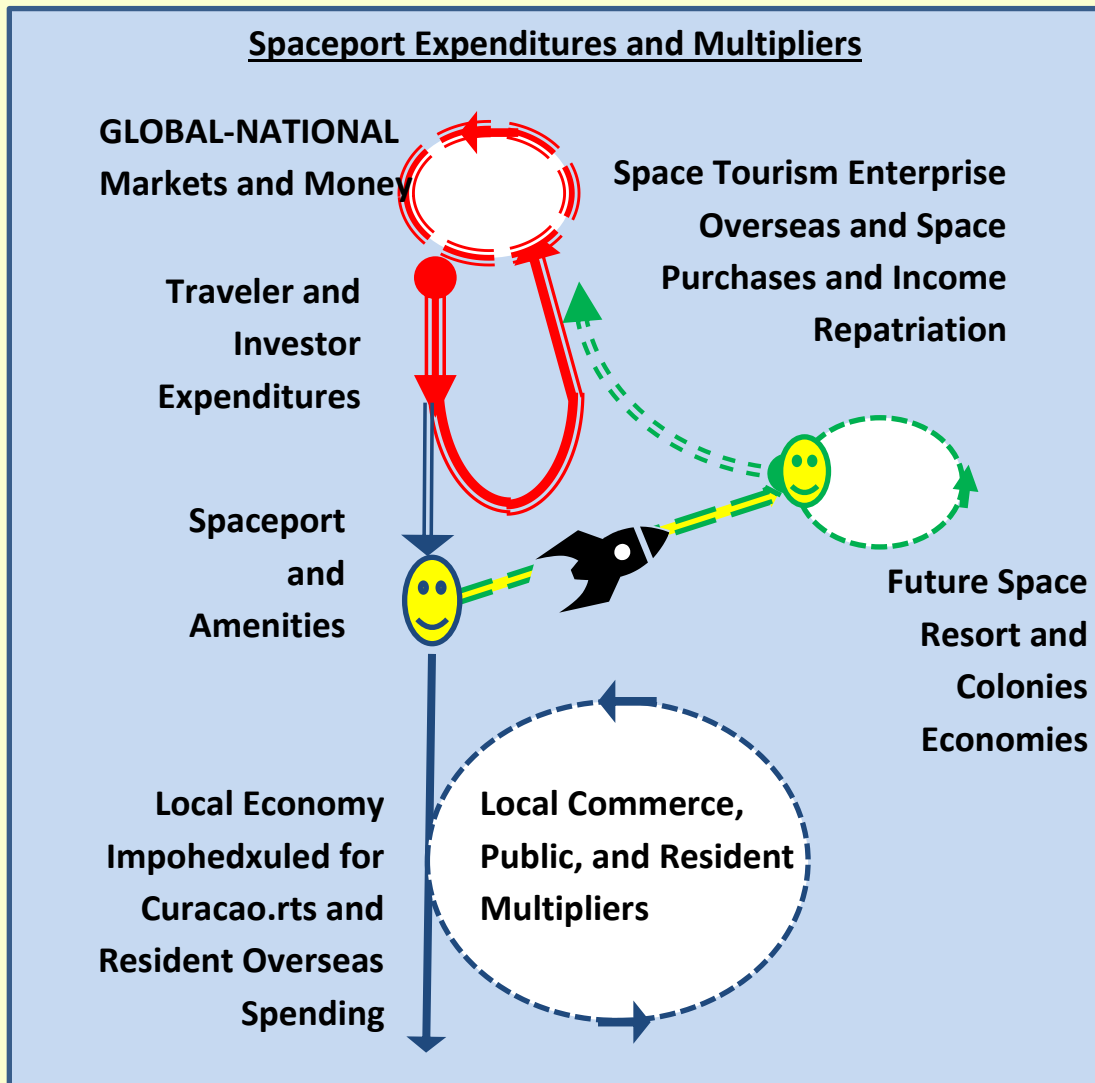


The Impact of Relocating Border Inspections on Tourism in the USVI

There has been a longstanding dispute over revenue allocations between the USVI and CBP (Customs and Border Protection). The latter propose to cease pre-inspections in the USVI and instead conduct border inspections at CONUS (mainland) airports such as Miami and JFK. With this revised arrangement, some passengers would no longer be able to fly directly to their local (non-international) domestic airports increasing wait and travel times, and other travel arrangements. The potential impact on the number of visitors and the USVI economy has been made on the basis of a survey of the travel and expenditure options of some USVI visitors and the available airline, airport, and Island statistics. A novel approach has been developed that takes account of the costs of travel in monetary, time, and stress as metrics of visitors' overall satisfaction with their vacations and the likelihood to revisit the USVI or recommend the destination to others. With this synthesis of motivators, the method bypasses the need for unreliable intermediate variables including tourism and air travel elasticity



Coming Soon to an Island Near You!



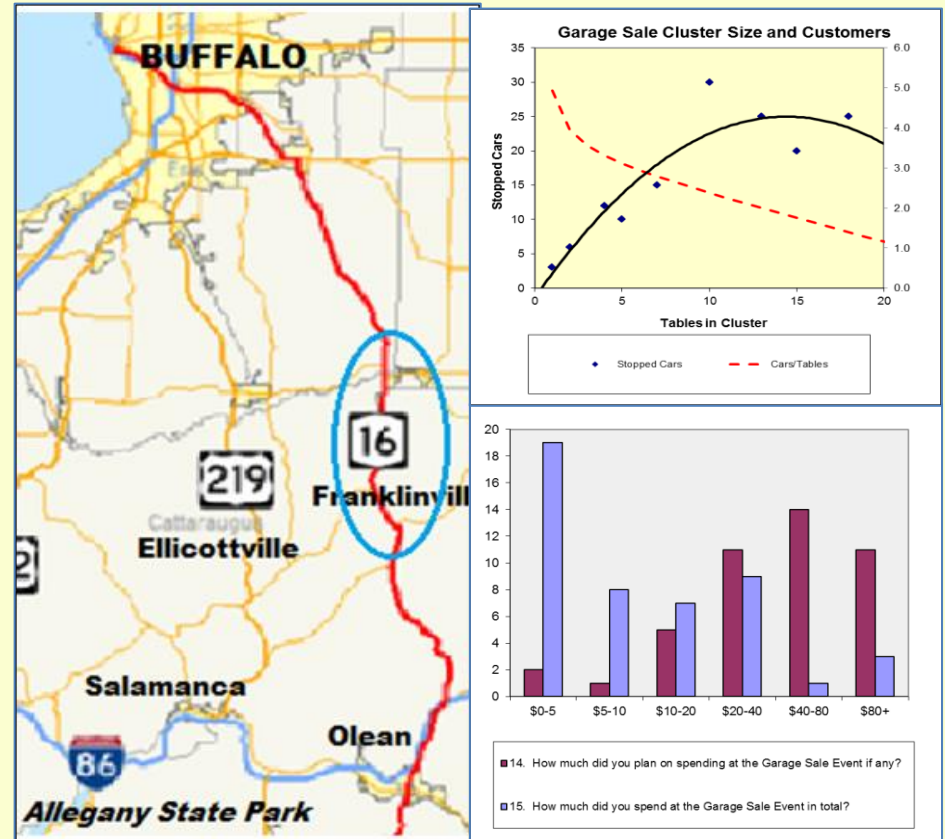
Does this meet the Honey Sustainability Criteria?

- **Build high value, rather than high volume tourism.**
- **Target socially/environmentally aware consumers.**
- **Center on local assets, not foreign imports: create linkages, reduce leakages.**
- **De-emphasize all-inclusive resort, vacation home & cruise ship tourism.**
- **Provide incentives to innovative 'green' developers and investors.**
- **Incorporate international best practices for sustainability.**

Scheduled for Curacao? Certainly innovative, but is it a major economy driver - an oil refinery, a Disney world? Is it a gimmick, loss leader, boondoggle, a cruise port, or as disruptive to existing patterns of tourism as passenger jets?

Passages and Destinations; A Studio Road to Rural Tourism Development

The general topic of “tourism studio” has been tourism and recreation in a rural area of Western New York, south of Buffalo, with a “client” such as the Cattaraugus County Department Economic Development, Planning and Tourism, local Chambers of Commerce, and various community organizations. Most tourist destinations have a “unique” history that they embellish and exaggerate as an attractor for tourists. One goal of the studio is to help places reveal, exploit, and protect that heritage. The towns and villages in Cattaraugus County were settled from 1800-onwards and especially after civil war, sourced its income from farming and forest products, now largely depleted, leaving modest remaining industry. Like many other small places across America the counties, towns, and villages are seeking to fill the gap, and tourism is an important component. The nine tourism studios in the Enchanted Mountains have sought to contribute to, an ongoing planning and development process.



Parallel Worlds – Education and Tourism – Vacations in Significance?

